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EXAMINER

ZHEN, LI B

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,234

Applicant(s)

KUBOTA, YOSHIYASU

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/22/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 10 – 21 are pending in the application.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 10 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,860,083 to Sukegawa [cited in the previous office action] in view of U.S. Patent No. 6,832,379 to Zeryck et al. [hereinafter Zeryck, cited in the previous office action] further in view of U.S. Patent No. 6,009,480 to Pleso.**

5. As to claim 10, Sukegawa teaches the invention substantially as claimed including an electronic device [flash memory unit 1, Fig. 1; col. 4, lines 2 – 11] adapted to be detachably mounted to main equipment [col. 4, lines 38 – 46] for providing optional data to the main equipment and for permitting optional functions to be executed [flash memory means uses a non-volatile flash memory as a data storage medium, and has an entire storage area logically sorted into a plurality of storage areas assigned to predetermined functions; col. 2, lines 42 – 53], the electronic device comprising:

a data memory unit [flash memory drive 26 or flash memory card 25; col. 4, lines 54 - 64];

software data stored in the data memory unit [device driver; col. 4, lines 12 – 21];

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an interface unit in form of a memory card interface for transfer of data from the electronic device to the select main equipment and from selected the main equipment to the electronic device [PC card controller 24 matching with a card bus, a flash memory drive; col. 4, lines 38 – 47 and col. 5, lines 28-40]; and

an output unit operable [a flash memory card 25 controlled by the PC card controller 24; col. 4, lines 38 – 46], upon mounting the electronic device to the selected main equipment [a PCI bus 20 is used as a local bus connected to the peripheral devices; col. 4, lines 37-47] and selecting one of said plurality of functions [set data storage mode; col. 6, lines 32 – 44], to output one of said portions of the software data containing said driver data for said selected function and corresponding to said respective computer operating environment [col. 4, lines 12-22] from the data memory unit to the selected main equipment through said interface unit for installation of said driver data in the selected main equipment to permit said selected function to be executed using the electronic device while the electronic device is mounted to the selected main equipment [controller 3 transfers to the host system 4 the control information necessary for starting the OS read out from the HDD 2. Based on the control information, the host system 4 starts the OS; col. 6, lines 27 – 45 and col. 4, lines 37-47].

6. Although Sukegawa teaches the invention substantially, Sukegawa does not teach software data including a plurality of portions each containing driver data for a respective one of a plurality of separately selectable functions.

However, Zeryck teaches software data including a plurality of portions each containing driver data for permitting execution of a respective one of a plurality of separately selectable functions [SP software utilizes layered device drivers to allow software functions to be dynamically activated or inactivated, specifically by adding or removing software drivers from a device driver stack, respectively; col. 7, lines 27 – 35], the electronic device being operable upon installation of a driver from the driver data for said selected function to execute one of said plurality of functions [col. 8, lines 43 – 57] and output one of said portions of the software data from the data memory unit to the main equipment [col. 9, lines 44 – 52].

7. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of software data that includes a plurality of portions each containing driver data for a respective one of a plurality of separately selectable functions as taught by Zeryck to the invention of Sukegawa because this enables the user to install one or more LDDs (layered device driver) and to specify the placement of each LDD relative to the other LDDs in various device driver stacks and also allows a LDD to be dynamically inserted into or removed from a particular device driver stack [col. 3, lines 57 – 65 of Zeryck]. As to each main equipment being operable in accordance with a plurality of different computer operating environments, Zeryck discloses the layered device driver registration system is separate from the operating system device driver registration system [see abstract and col. 10, lines 3-13]. Since the layered device driver is separate from the operating system, it is obvious that the layered device driver can operating with different operating systems.

In addition, Pleso teaches a peripheral device which includes within its memory a device driver which is downloadable to a computing system so that the computing system can communicate with the peripheral device [col. 7, lines 47-60], software data including a plurality of portions each containing driver data for permitting execution of a respective one of a plurality of separately selectable functions in accordance with a computer operating environment of a main equipment selected from a plurality of main equipments [JAVA is employed the driver becomes platform independent and thus the device can be hooked up to any type of computer due to being platform independent. The peripheral device will go into driver download mode; col. 8, lines 41-56 and col. 13, lines 36-46], each main equipment being operable in accordance with a respective one of a plurality of different computer operating environments [single peripheral device driver would be suitable for use in connection with a Pentium PC running OS/2, a Pentium PC running WINDOWS95, a Power PC running MAC OS, or any other processor or operating system (e.g., UNIX); col. 14, lines 27-42].

8. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of including software data including a plurality of portions each containing driver data for permitting execution of a respective one of a

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plurality of separately selectable functions in accordance with a plurality of computer operating environments as taught by Pleso to the invention of Sukegawa as modified because this allows the device being installed to the computer system to be platform independent, which affords for the device to be connectable and communicable with a variety of different computing systems [col. 2, lines 60-65 of Pleso].

9. As to claim 13, Sukegawa as modified teaches an electronic apparatus [flash memory unit 1, Fig. 1; col. 4, lines 2 – 11 of Sukegawa], comprising:

a main apparatus selected from a plurality of main apparatus [col. 4, lines 38 – 47 and col. 5, lines 28-40 of Sukegawa], each main apparatus being operable in accordance with a respective one of a plurality of different computer operating environments [OS (Operation System) of a host system 4; col. 4, lines 12 – 30 of Sukegawa and col. 14, lines 27-42 of Pleso]; and

an electronic device detachably mounted to the selected main apparatus [col. 4, lines 38 – 46 of Sukegawa] for exchanging optional data with the selected main apparatus [flash memory means uses a non-volatile flash memory as a data storage medium, and has an entire storage area logically sorted into a plurality of storage areas assigned to predetermined functions; col. 2, lines 42 – 53 of Sukegawa], the electronic device including a data memory unit [flash memory drive 26 or flash memory card 25; col. 4, lines 54 – 64 of Sukegawa], and software data stored in the data memory unit [device driver; col. 4, lines 12 – 21 of Sukegawa], the software data including a plurality portions each containing driver data for permitting execution of a respective one of a plurality of separately selectable functions [col. 7, lines 27 – 35 of Zeryck] in accordance with the computer operating environment of the selected main apparatus when the electronic device is mounted to the selected main apparatus [col. 4, lines 37-47 of Sukegawa], an interface unit in form of a memory card interface unit for transfer of data from the electronic device to the selected main apparatus and from the selected main apparatus to the electronic device [PC card controller 24 matching with a card bus, a flash memory drive; col. 4, lines 38 – 47 of Sukegawa],

the selected main apparatus including an identification unit operable to identify the portions stored in the data memory unit of the electronic device [set data storage mode; col. 6, lines 32 – 44 of Sukegawa], and to obtain the portion corresponding to the selected function and corresponding to the respective computer operating environment [col. 8, lines 41-56 and col. 13, lines 36-46 of Pleso] from the electronic device through the interface unit upon selecting a respective one of the plurality of functions and install the obtained portion on the selected main apparatus [col. 8, lines 43 – 57 of Zeryck], such that the selected function can be executed using the electronic device [col. 6, lines 27 – 45 of Sukegawa] while the electronic device is mounted to the selected main apparatus [col. 4, lines 37-47 of Sukegawa]. As to the motivation for combining Sukegawa with Zeryck and Pleso, see the rejection to claim 10 above.

10. As to claim 16, Sukegawa as modified teaches a method of obtaining driver software data by a main apparatus [OS (Operation System) of a host system 4; col. 4, lines 12 – 30 of Sukegawa] from an electronic device [flash memory unit 1, Fig. 1; col. 4, lines 2 – 11 of Sukegawa] detachably mounted thereto, the main apparatus selected from a plurality of main apparatuses [col. 4, lines 38 – 47 and col. 5, lines 28-40 of Sukegawa], each main apparatus being operable in accordance with a respective one of a plurality of different computer operating systems [OS (Operation System) of a host system 4; col. 4, lines 12 – 30 of Sukegawa and col. 14, lines 27-42 of Pleso], to enable an optional function to be executed [col. 2, lines 42 – 53 of Sukegawa] while the electronic device is mounted to the selected main apparatus [col. 4, lines 38 – 46 of Sukegawa], the method comprising:

storing driver software data in the electronic device, the driver software data including a plurality of portions, each portion for enabling execution of a respective one of a plurality of separately selectable functions [col. 8, lines 43 – 57 of Zeryck] in accordance with the respective computer operating environment of the selected main apparatus when the electronic device is mounted to the selected main apparatus [col. 4, lines 37-47 of Sukegawa];

selecting one function from the plurality of separately selectable functions [SP software utilizes layered device drivers to allow software functions to be dynamically activated or inactivated; col. 7, lines 27 – 35 of Zeryck and col. 6, lines 32 – 44 of Sukegawa];

identifying the portion of the software data corresponding to the selected function [adding or removing software drivers from a device driver stack, respectively; col. 7, lines 27 – 35 of Zeryck];

transferring the identified portion of the software data from the electronic device to the main apparatus [col. 6, lines 27 – 45 of Sukegawa] through an interface unit having a form of a memory card interface [col. 4, lines 38 – 47 of Sukegawa]; and

installing the identified portion of the software data on the selected main apparatus to enable execution of the selected function using the electronic device [col. 8, lines 43 – 57 of Zeryck] while the electronic device is mounted to the selected main apparatus [col. 4, lines 37-47 of Sukegawa]. As to the motivation for combining Sukegawa with Zeryck and Pleso, see the rejection to claim 10 above.

11. As to claims 11 and 14, Sukegawa as modified teaches said software data are stored in said data memory using a file format [col. 9, lines 45 – 52 of Zeryck], and said identification unit identifies said selected one of said software data using said file format [col. 5, lines 40 – 54 of Sukegawa].

12. As to claim 17, Sukegawa as modified teaches storing the driver software data in the electronic device using a file format [col. 9, lines 45 – 62 and col. 10, lines 3-13 of Zeryck], and the step of transferring transfers the identified portion of the driver software data based on the file format [col. 6, lines 27 – 45 of Sukegawa].

13. As to claims 12, 15 and 18, Sukegawa as modified teaches storage addresses corresponding to keywords [a key for each LDD; col. 4, lines 4 – 22 of Zeryck] identifying the plurality of functions are stored at leaders of address spaces in the data

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memory unit, and the portions are stored at the storage addresses corresponding to the keywords [col. 4, lines 4 – 22 of Zeryck].

14. As to claims 19 – 21, Sukegawa as modified teaches the plurality of functions includes at least one function which is not a memory function [device driver 5 has a function of controlling the flash memory unit 1 under the management of the OS (Operation System) of a host system 4; col. 4, lines 12 – 22 of Sukegawa].

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2194

lbz


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SUPERVISORY PATENT EXAMINER